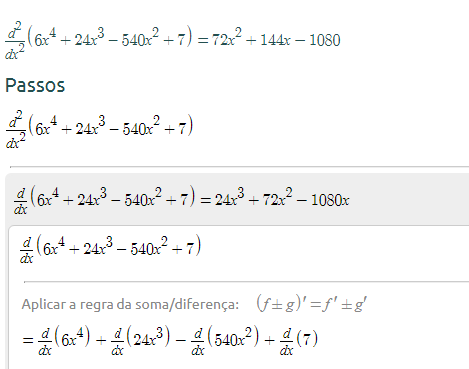
Resolução da lista 3 de cálculo 1

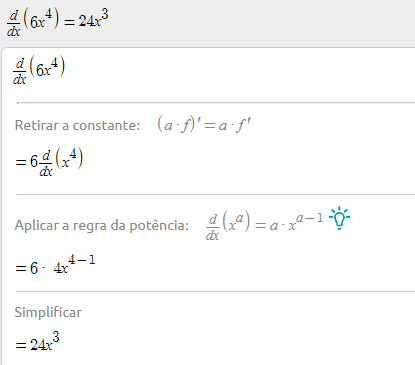
14)

a) devemos aplicar a integral de segunda ordem em seguida igualaremos a zero para encontrar as raízes.

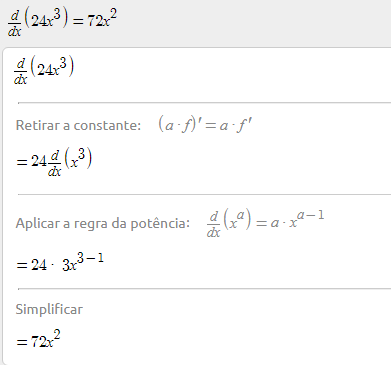


Para facilitar o raciocínio devemos derivar separadamente cada elemento, logo:

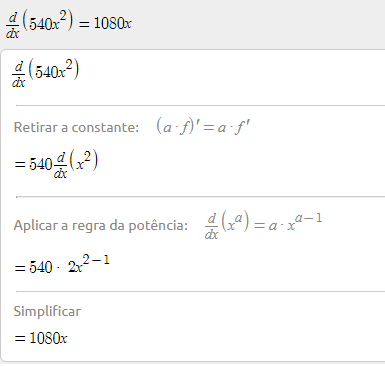
(i)



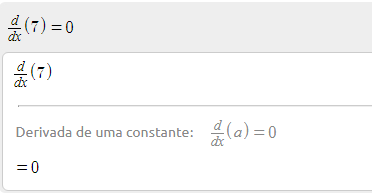
(ii)



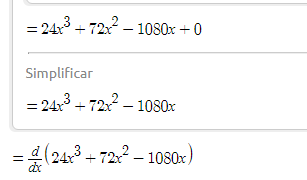
(iii)



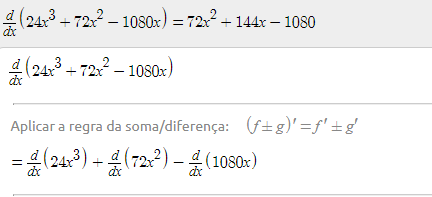
(iv)



Logo nossa função após a derivada de primeira ordem fica:

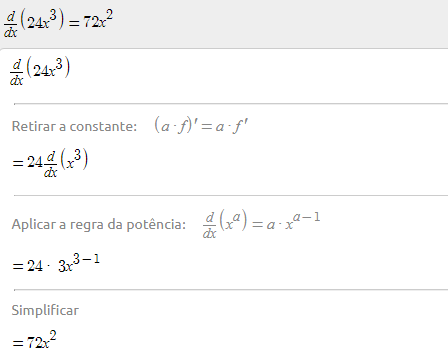


Devemos realizar a derivada de segunda ordem, segue o mesmo raciocínio:

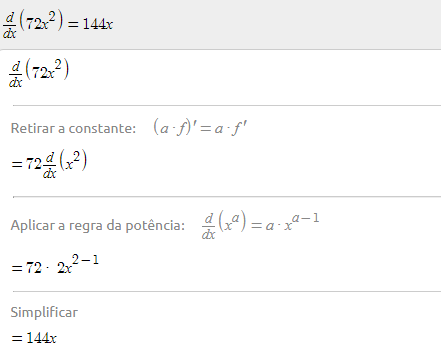


Devemos separar e derivar como foi feito na derivação de primeira ordem:

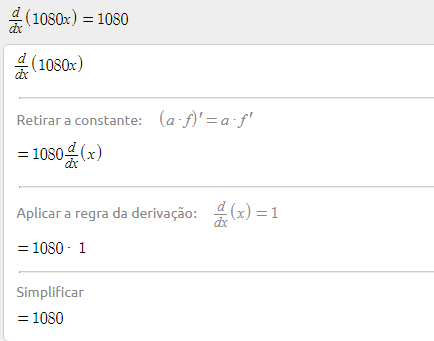
(I)



(II)



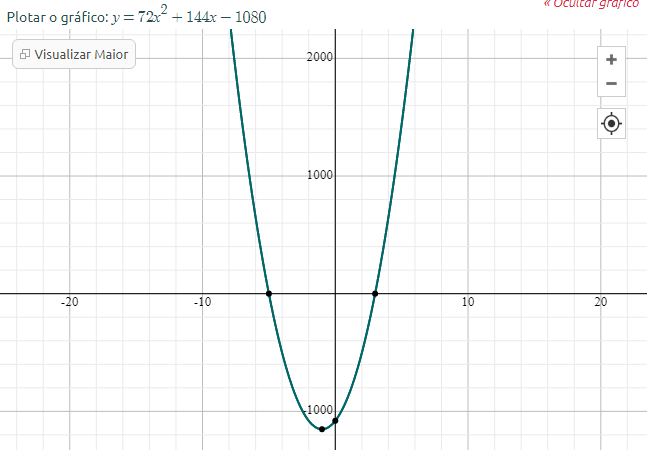
(III)

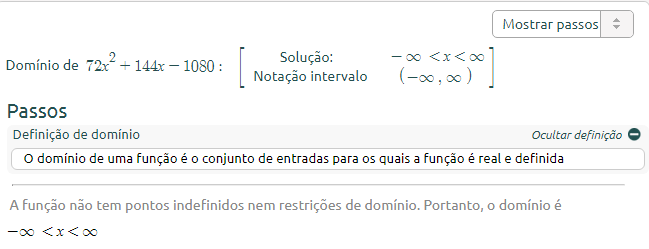


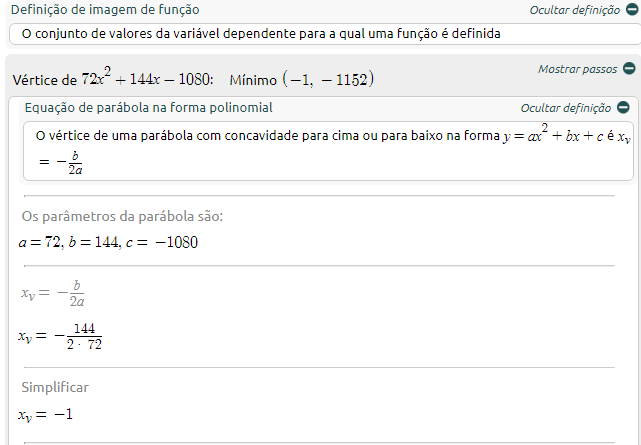
Nossa função deverá ser igualada a zero:

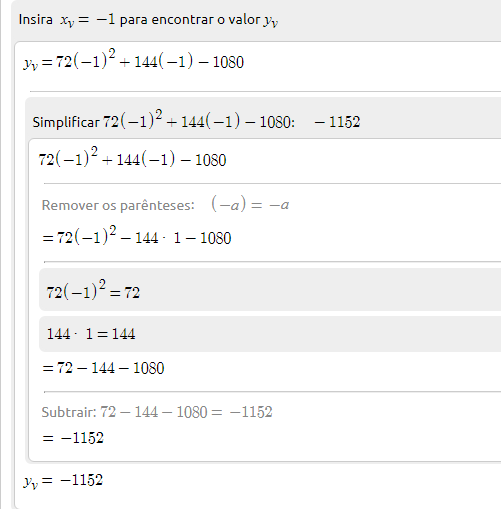
F´´ (x) = 72x2+ 144x – 1080

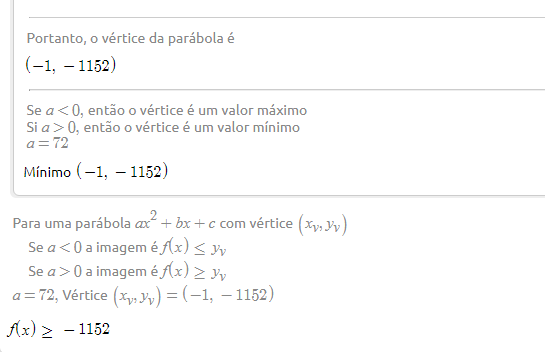
Contudo vale lembrar o gráfico da função:

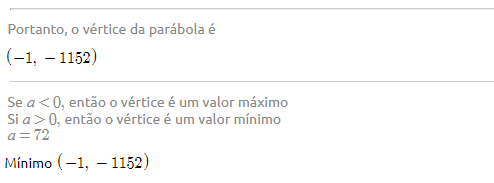
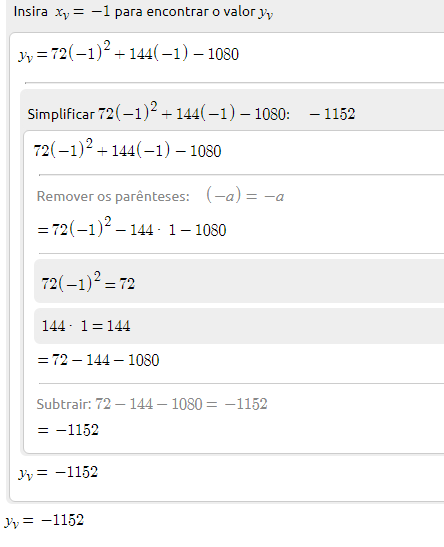
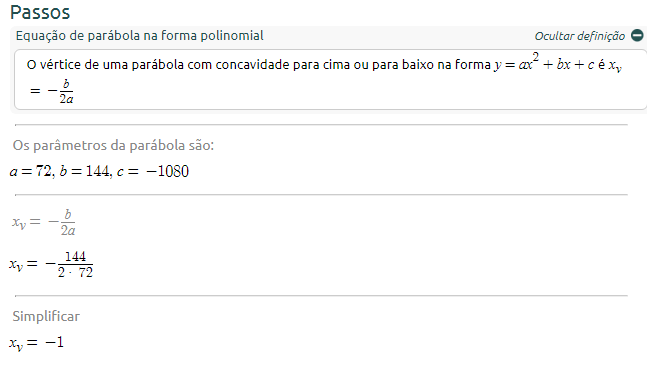








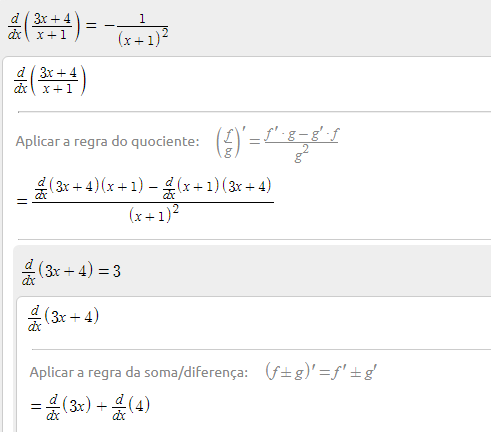


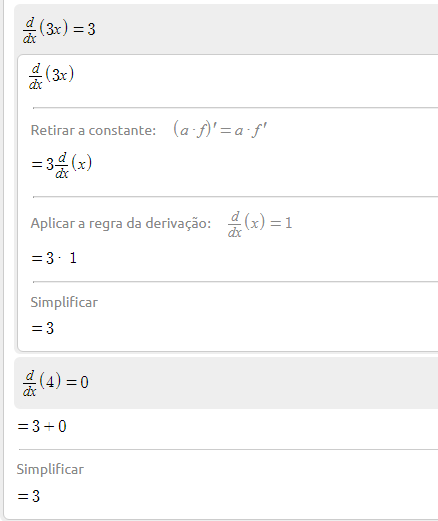


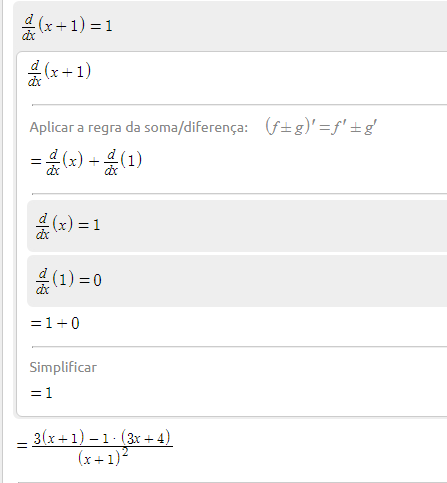
16-

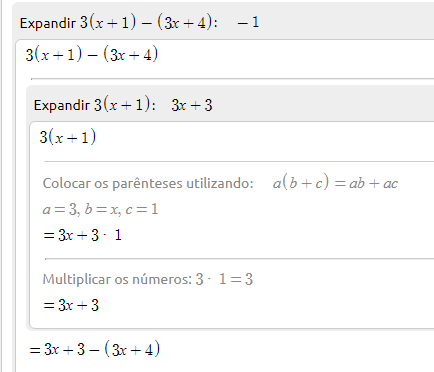
A)

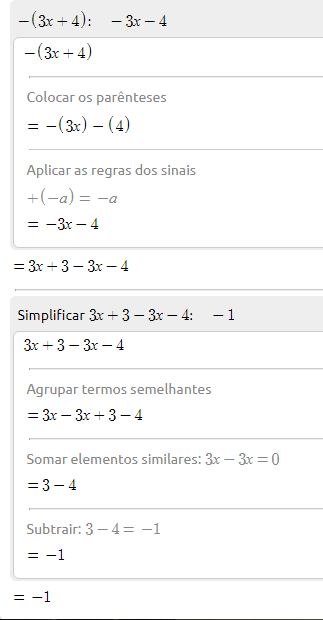
(I). Devemos fazer a derivada de primeira ordem:

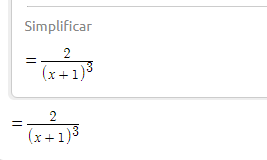
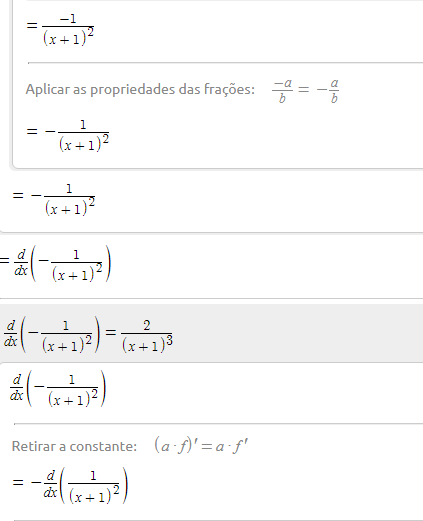




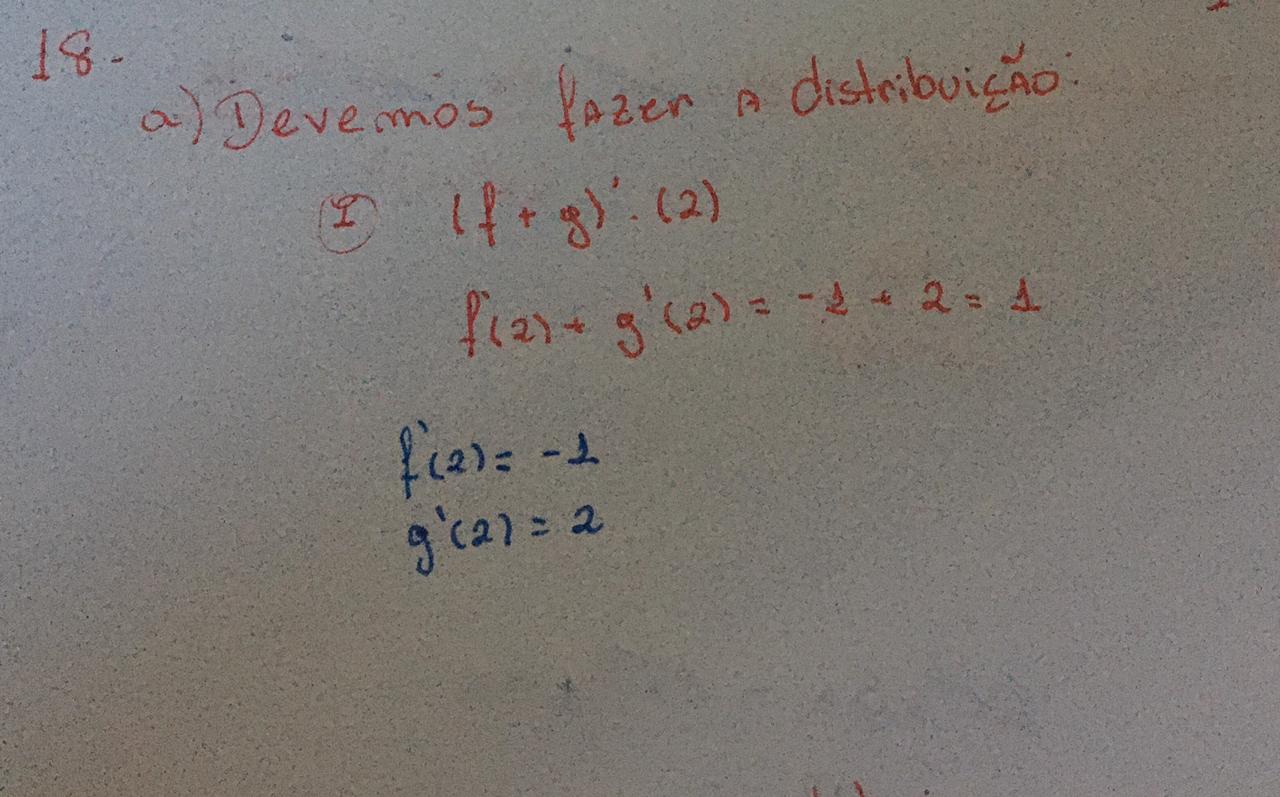


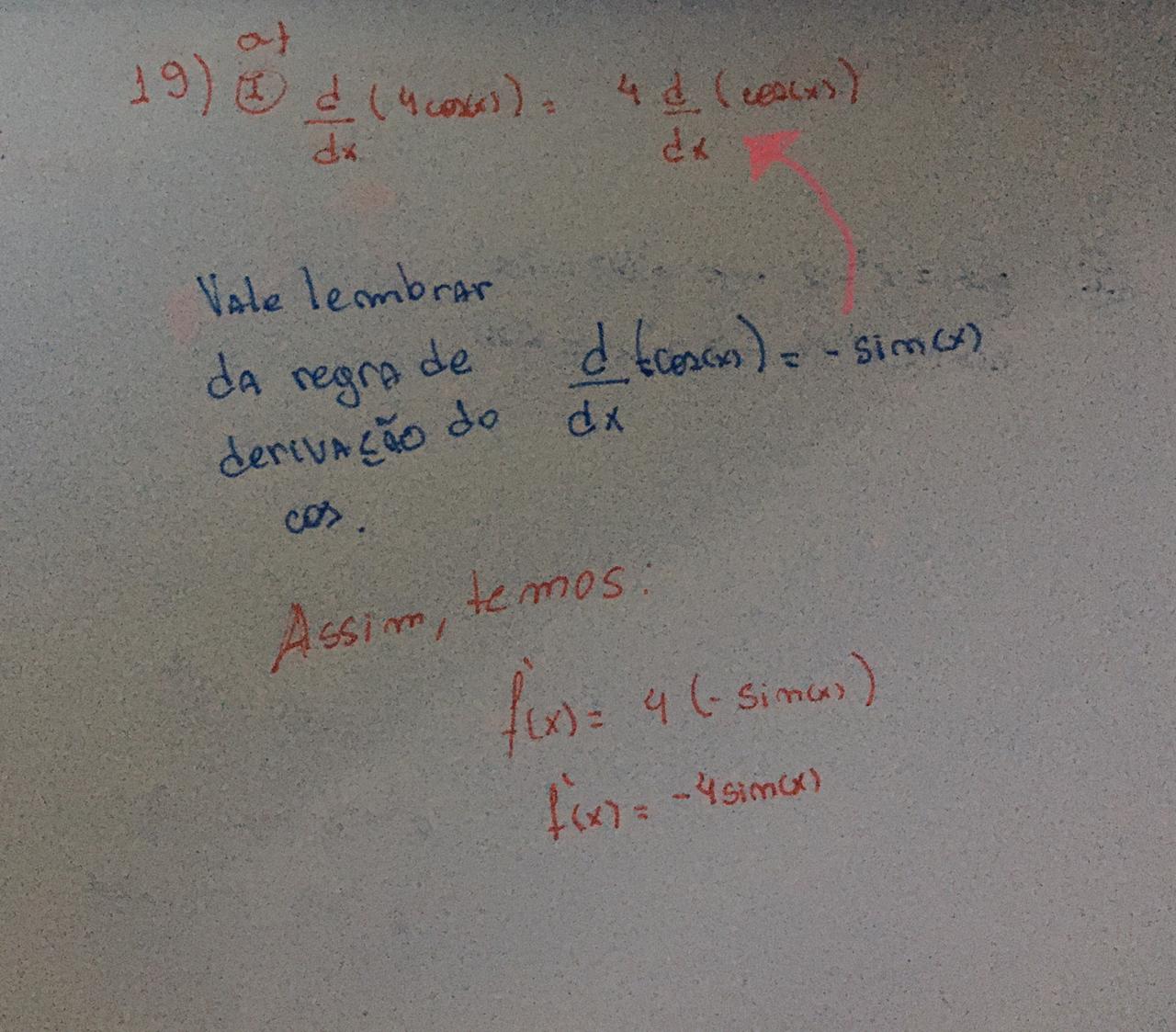






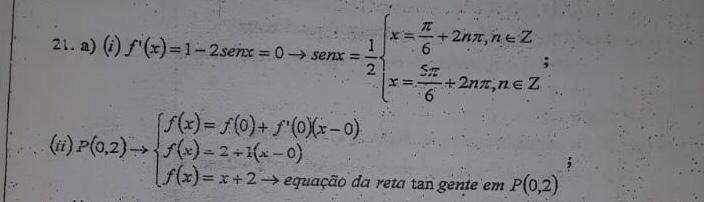
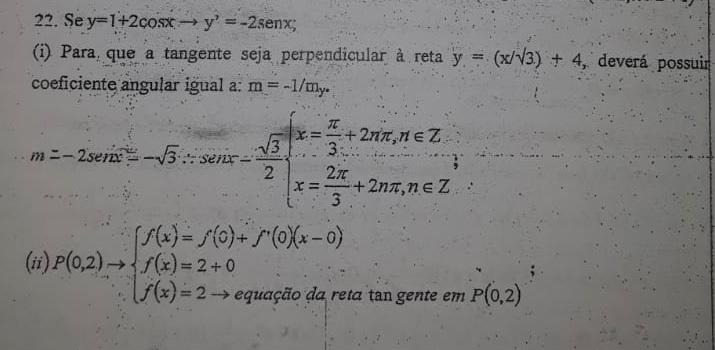
17)

18) a)

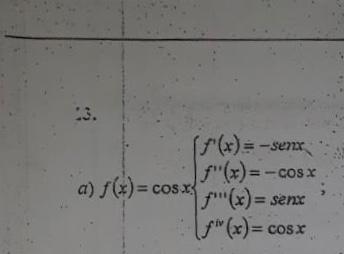
19) a)

20)

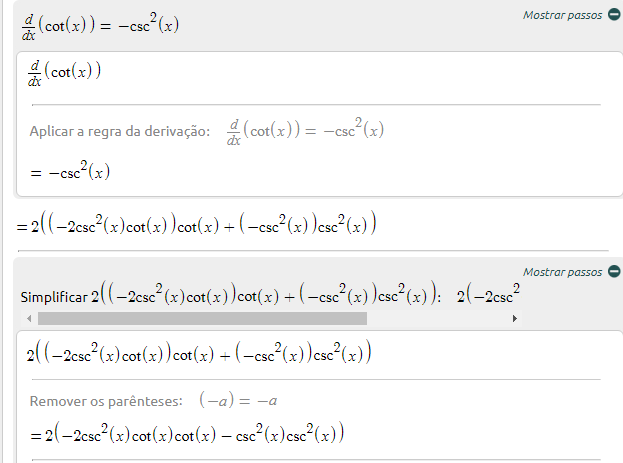
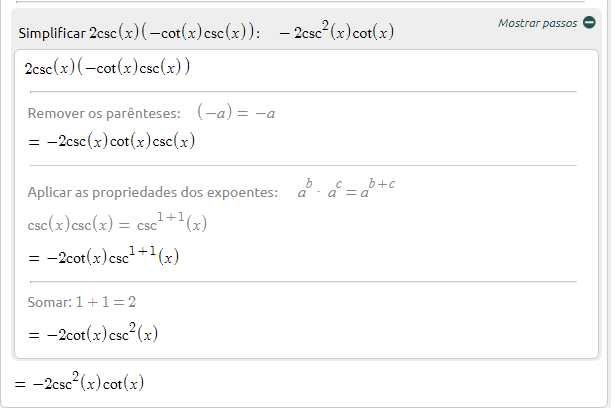
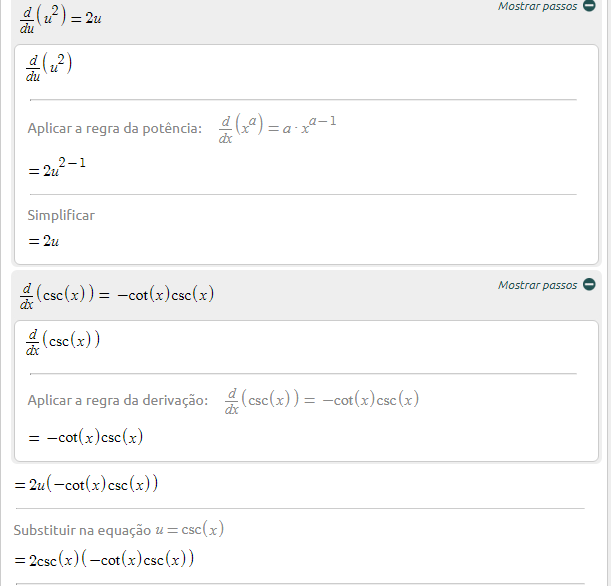
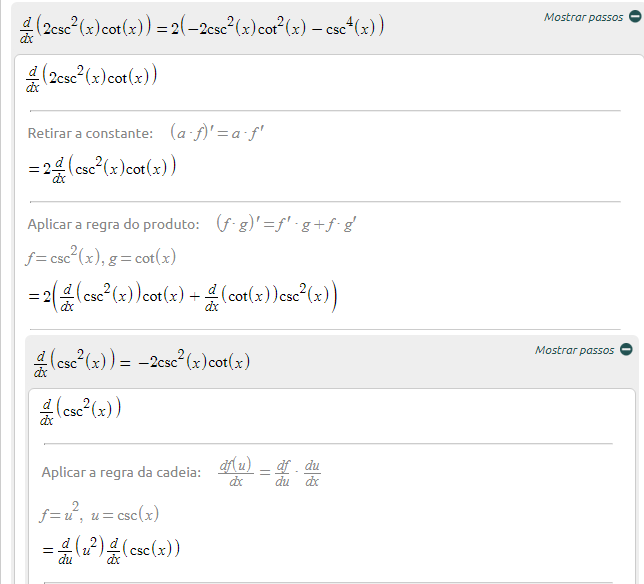
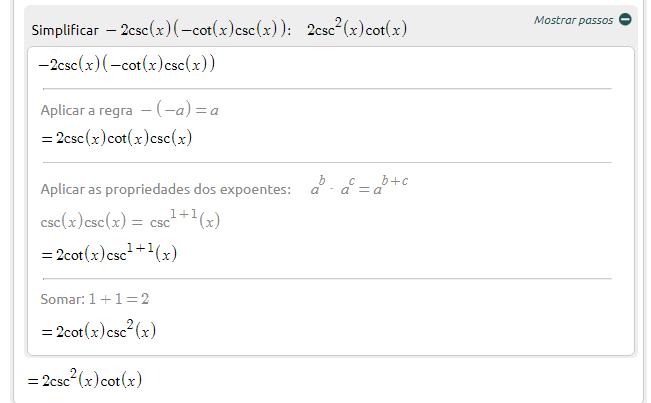
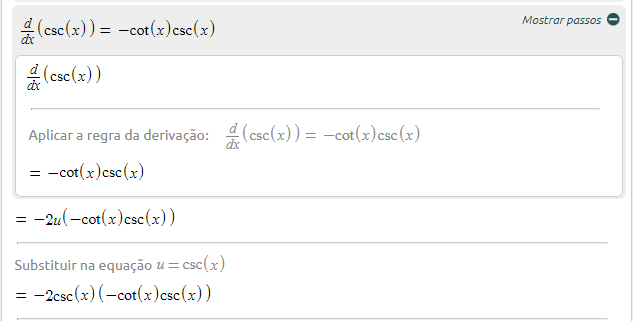
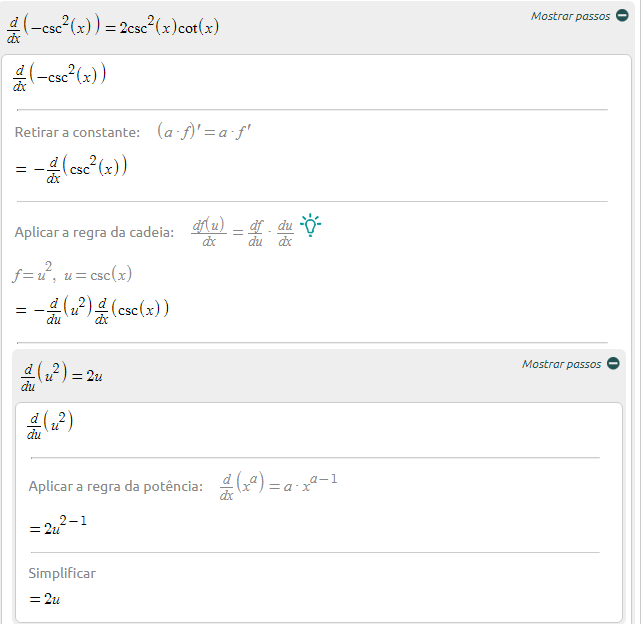
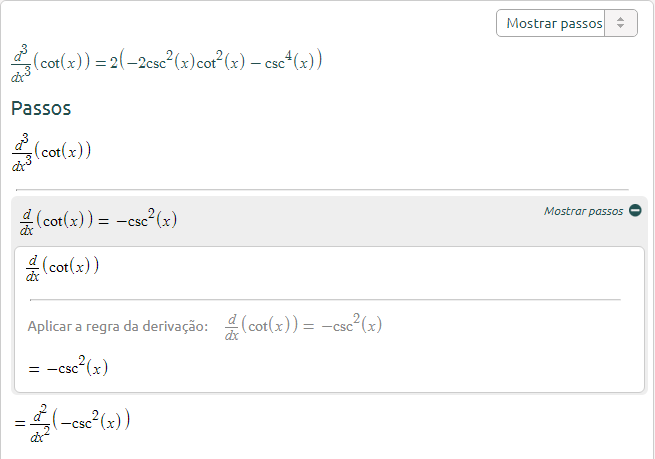
21) a)

  
22) a)

23) a)

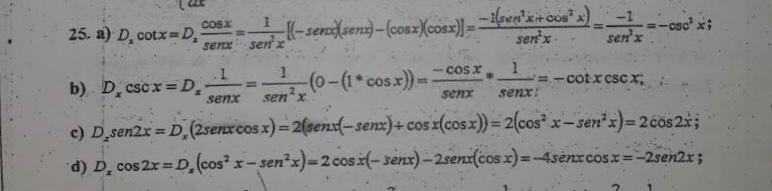


24) a)

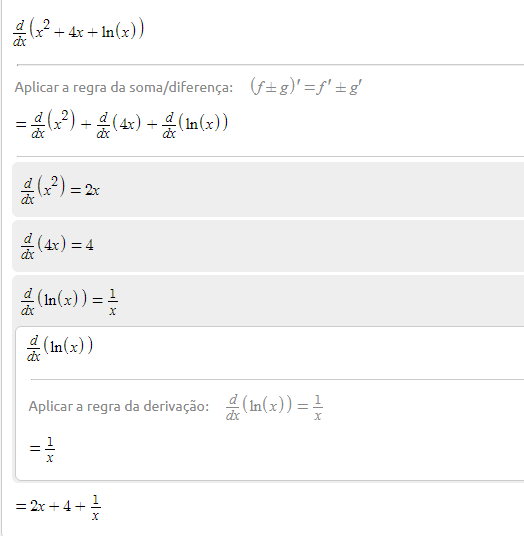




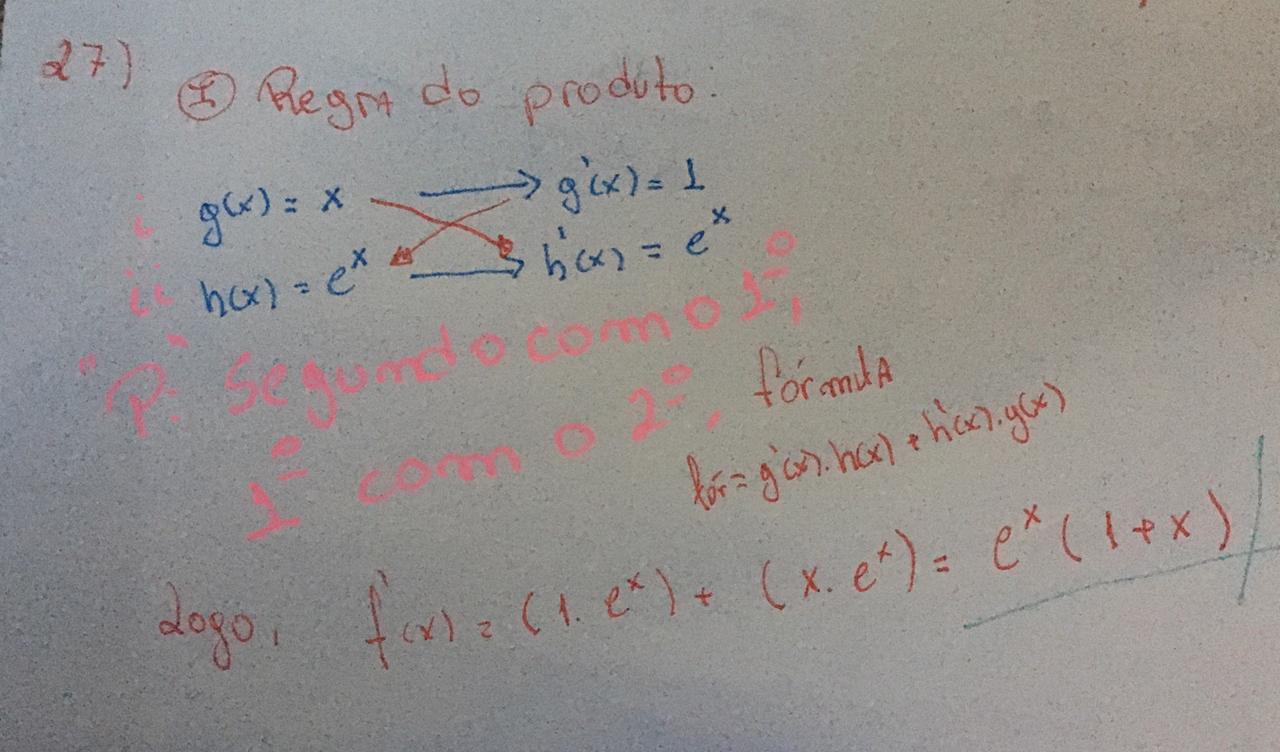
25)



26) a)



27) a)



28) a)

